

Amendments to the Claims:

Please cancel claims 1-26 as presented in the underlying International Application No. PCT/DE2003/002568.

Please add new claims 27-53 as indicated in the listing of claims below.

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-26 (cancelled)

Claim 27 (new): A membrane module for separating off hydrogen from a reformat gas and having a plurality of planar membrane cells, each of the plurality of membrane cells comprising:

two hydrogen-selective planar membranes;

two flat membrane frames, each surrounding one of the two membranes and each having a raised edge, each of the two frames disposed so that the raised edges face one another and contact one another;

an air-permeable spacer layer disposed between the two membranes and configured to discharge permeate gas;

a feed frame surrounding a feed space for the reformat gas adjacent one of the two membranes and bearing closely against the edges the membrane frame, the feed frame having external dimensions corresponding to external dimensions of the membrane frames and forming, together with the membrane frames, a stack having planar sides faces, wherein the membrane frames each include a first opening towards a side face of the stack, wherein the feed frame includes second and third openings toward side faces of the stack, and wherein one of the membrane frames and the feed frame are connected together in a gastight manner except for the first, second and third openings.

Claim 28 (new): The membrane module as recited in claim 27, wherein the membrane frames and the feed frame are connected together by welding or soldering.

Claim 29 (new): The membrane module as recited in claim 27, wherein each of the membrane frames includes a plurality of webs directed toward one of the second and third openings in the feed frame.

Claim 30 (new): The membrane module as recited in claim 29, wherein the webs extend in a radial distribution from the second or third opening in a direction of an edge of the membrane.

Claim 31 (new): The membrane module as recited in claim 27, wherein each of the membrane frames includes a flat material and wherein at least one of the raised edge, the first opening and the webs are stamped.

Claim 32 (new): The membrane module as recited in claim 27, wherein each of the membrane frames includes a stamped metal sheet.

Claim 33 (new): The membrane module as recited in claim 32, wherein each of the two membrane frames are welded together at their raised edges.

Claim 34 (new): The membrane module as recited in claim 27, wherein the feed frame includes continuous annular strips that are narrower than the raised edges of the membrane frames.

Claim 35 (new): The membrane module as recited in claim 34, wherein the second and third openings are recesses in the strips.

Claim 36 (new): The membrane module as recited in claim 27, wherein the feed frame includes metal.

Claim 37 (new): The membrane module as recited in claim 33, wherein the membrane frame and the feed frame are welded together.

Claim 38 (new): The membrane module as recited in claim 37, further comprising a plurality of

passages welded to the side faces of the stack and connecting at least two of the first second and third openings to each other and to the outside of the stack.

Claim 39 (new): The membrane module as recited in claim 37, further comprising further membrane cells on the topmost and bottommost feed spaces of the stack, wherein the further membrane cells include a further membrane frame surrounding a further membrane, a further spacer layer adjacent the further membrane and an end plate adjacent the further spacer layer.

Claim 40 (new): The membrane module as recited in claim 37, wherein the external dimensions of the membrane frames and the feed frames are in the shape of a rectangle with rounded corners.

Claim 41 (new): A method for producing a membrane module for separating off hydrogen from a reformat gas, the membrane module including a plurality of planar membrane cells stacked on top of one another and connected to one another, each membrane cell including two hydrogen-selective, planar membranes that are each surrounded by a flat membrane frame, an air-permeable spacer layer disposed between the membranes and configured to discharge a permeate gas, and a feed frame that surrounds a feed space for the reformat gas adjacent one of the two membranes, the membrane frames and feed frame having identical external dimensions and being assembled to form a stack with planar side faces, the method comprising:

- providing each the two membrane frames of each membrane cell with raised edges directed toward one another and in contact with one another;

- providing each the two membrane frames with at least one first opening toward a side face of the stack;

- fitting the feed frame tightly onto the edges of the membrane frames two adjacent membrane cells except for second and third openings in the feed frame toward side faces of the stack; and

- connecting by one of soldering and welding the outer sides of all the membrane frames and feed frames in a gastight manner except for the first, second, and third openings.

Claim 42 (new): The method as recited in claim 41, further comprising providing the membrane frames with webs directed toward one of the second and third openings.

Claim 43 (new): The method as recited in claim 42, wherein the webs are provided so as to extend in a radial distribution from the second and third opening in the direction of a membrane edge.

Claim 44 (new): The method as recited in claim 41, wherein the providing of the membrane frames includes stamping the raised edges and the at least one first opening into a flat material.

Claim 45 (new): The method as recited in claim 41, wherein the membrane frames are stamped from sheet metal.

Claim 46 (new): The method as recited in claim 45, further comprising welding together the two membrane frames of each membrane cell at the raised edges.

Claim 47 (new): The method as recited in claim 41, wherein the feed frames include continuous annular strips that are narrower than the raised edges.

Claim 48 (new): The method as recited in claim 47, wherein the openings in the feed frames are formed by recesses in the strips.

Claim 49 (new): The method as recited in claim 41, wherein the feed frames include metal.

Claim 50 (new): The method as recited in claim 45, wherein the membrane frames and the feed frames are welded together.

Claim 51 (new): The method as recited in claim 50, further comprising welding passages onto the side faces of the stack and connecting corresponding ones of the first, second and third openings to one another and to the outer side.

Claim 52 (new): The method as recited in claim 41, further comprising disposing further membrane cells on the topmost and bottommost feed spaces of the stack, each further membrane

cell including a further membrane frame surrounding a further membrane, a further spacer layer disposed adjacent to the further membrane and an end plate disposed adjacent to the further spacer layer.

Claim 53 (new): The method as recited in claim 41, wherein the external dimensions of the membrane frames and the feed frames form a rectangle with rounded corners.